

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 March 2006 (09.03.2006)

PCT

(10) International Publication Number
WO 2006/025595 A1

(51) International Patent Classification:
B23K 3/08 (2006.01)

(21) International Application Number:
PCT/JP2005/016376

(22) International Filing Date: 31 August 2005 (31.08.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004-254532 1 September 2004 (01.09.2004) JP

(71) Applicants (for all designated States except US): MAT-
SUSHITA ELECTRIC INDUSTRIAL CO., LTD.
[JP/JP]; 1006, Oaza Kadoma, Kadoma-shi, Osaka
571-8501 (JP). MORIKAWA, Makoto.

(72) Inventors; and

(75) Inventors/Applicants (for US only): HIRATA, Shuichi.
UENO, Yasuharu. YOSHIDA, Hiroyuki. YOSHIDA,
Noriaki.

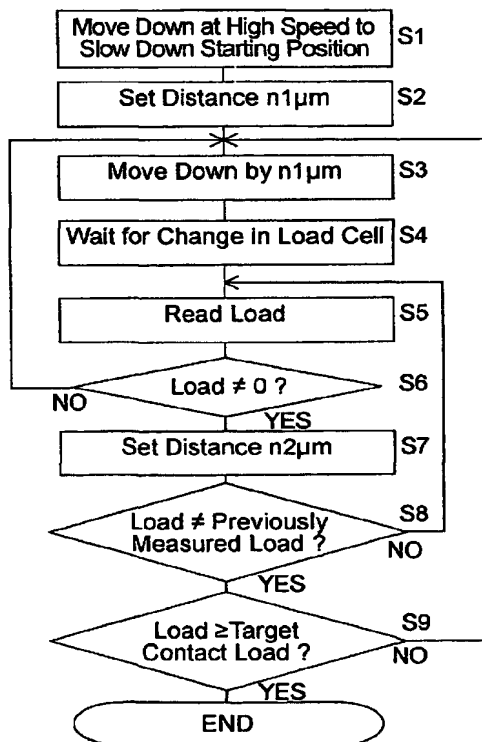
(74) Agent: ISHIHARA, Masaru; 5th Floor, Tatsuno Nishi-
tenma Bldg., 1-6, Nishi-tenma 3-chome, Kita-ku, Osaka-
shi, Osaka 530-0047 (JP).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG,
KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM,
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM,
SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
YU, ZA, ZM, ZW

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,
RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: METHOD OF CONTROLLING CONTACT LOAD IN ELECTRONIC COMPONENT MOUNTING APPARATUS



(57) Abstract: A method of controlling contact load in an apparatus for mounting electronic components on a substrate, in which a head is lowered at high speed to a slow down starting position where there is no risk that the electronic component makes contact with the substrate (S1), and from there the head is lowered at low speed until a predetermined target contact load is detected. The process of lowering the head at low speed includes the steps of moving down the head a predetermined distance (S3), measuring load after the step of moving down the head (S5), and determining whether the measured contact load has reached the target contact load (S9). The steps of moving down the head (S3) and measuring the load (S5) are repeated until the measured load reaches the target contact load. The actual contact load is precisely controlled to be close to a very small set level of target contact load. Accordingly, electronic components using low dielectric constant material are mounted without the risk of damage.

WO 2006/025595 A1



Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.